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(54) TEMPERATURE CONTROL DEVICE FOR METAL MOLD

(57) Abstract

PURPOSE: To improve productivity and to make sure of safety by controlling a temp. of a metal mold, in which coolant in a liq. storage chamber in this inside of a mold is vaporized by heat input from a casting material and then is condensed in a gas condensing part to be flowed back to the chamber.

CONSTITUTION: The coolant with high b.p. 3 such as mercury is stored in the liq. storage chamber 2 in the metal mold 1, in which the gas condensing part 5 is joined to the chamber 2 as closed circuit, and is heated to a settled temp. for the mold 1 by conductive heat from the material 4 poured into a cavity in the mold 1 prevent a temp. drop of the mold 1 under mass production. On the other hand, in case of heating the mold over the settled temp. by the above-mentioned heat input, the coolant 3 is vaporized and cools the

mold 1 to control the mold temp. Further, the vaporized vapor is condensed in the gas condensing part 5 and flowed back again to the chambers 2. A coolant pressure in the chamber 2 is the same or lower than an atmospheric pressure state, and no leakage of the coolant 3, this mold is operated under safety.

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